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Fewer Fish Are Being Caught

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Catches from the world's oceans are severely declining but the trend has been masked by China's practice of increasingly overreporting the amount of fish it lands each year, researchers say. A team of scientists based at the University of British Columbia at Vancouver found that global catches, which were thought to be increasing during the 1990s by 700 million pounds of fish per year, actually have been decreasing by nearly 800 million pounds of fish annually. Just one entity, the Food and Agriculture Organization of the United Nations, compiles global fisheries statistics, but it relies on voluntary reporting of catches from countries to estimate the amount of fish the oceans hold.

The new studies being reported Thursday in the journal Nature call into question the veracity of FAO figures and its reporting system. "FAO must generally rely on the statistics provided by member countries, even if it is doubtful that these correspond to reality," authors Reg Watson and Daniel Pauly said.

Moreover, by subtracting just one fish from the equation, the abundant Peruvian anchoveta, which is used only for fish meal and whose population fluctuates due to El Nino, an even more striking decrease was apparent: 1.5 billion pounds a year less seafood available for human consumption. "Misreporting by countries with large fisheries, combined with the large and widely fluctuating catch of species such as the Peruvian anchoveta, can cause globally spurious trends," Watson and Pauly said.

Since 1988, when the world's seafood supply peaked at 34 pounds a person each year, the combined effects of overfishing and increasing human populations have reduced the amount of fish and shellfish available on Earth to only about 25 pounds a person per year now, according to the findings. The trend is projected to continue rapidly downward to less than 17 pounds a person each year by 2020.

The studies' authors also note that the practice of aquaculture, or fish farming, cannot make up the difference since that system relies on the use of fish meal which comes from a third of all fish landed globally.

The Chinese government relies on local officials to provide catch figures. Wan Cheng, a spokesman for the Chinese Agricultural Ministry's Fisheries Department, said the government had offered county and provincial officials job promotions based on growth in those figures, giving them incentive to inflate numbers. That practice ended two years ago, when the government put into effect a "zero growth" policy saying catch reports from oceans should not exceed 1998 levels of about 35 billion pounds of fish and shellfish per year. Wan said preservation of fisheries is now the aim and there is no longer any pressure to boost figures, which also were subject to some defects due to imperfect methods of compiling information.

"Local government officials have no incentive to inflate their fishing output. Therefore, we believe there is no intentional overreporting of statistics, but only some possible statistical defects," Wan said. "The Chinese government has noted the problem of falling fish stocks and is paying more attention to the preservation of resources."

Using statistics gathered by the FAO since 1950, the scientists created maps of world fisheries catches and then built a computer model to predict catch size in different ocean regions. The model showed China's reported catches were unrealistically high when compared with catches from other ocean areas that have similar characteristics such as depth, temperature and biological productivity.

The findings came as little surprise to Lee Alverson, a global fisheries consultant in Seattle who headed research for the National Marine Fisheries Service in the Northwest and Alaska from 1970 to 1980. "It takes a lot of nerve to make the sort of accusation they did about China, but there were a lot of scientists who felt nervous about those numbers," Alverson said Tuesday. "If any of the nations are putting bogus numbers into the accounting process, then our ability to assess if overfishing is going on is in jeopardy."

On the Net:

Nature: http://www.nature.com/nature

UBC Fisheries Centre: http://www.fisheries.ubc.ca